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18

19   UNITED STATES DISTRICT COURT

20   NORTHERN DISTRICT OF CALIFORNIA

21   SAN FRANCISCO DIVISION

22 ORACLE AMERICA, INC.   Case No. CV 10-03561 WHA

23   Plaintiff,   **ORACLE AMERICA, INC'S
                                            OPPOSITION TO GOOGLE'S
24   v.   MOTION IN LIMINE TO EXCLUDE
                                            EVIDENCE REGARDING
25 GOOGLE INC.   COMPATIBILITY TESTING SUITE**

26   Defendant.

27   Dept.: Courtroom 8, 19th Floor
                                            Judge: Honorable William H. Alsup
28

ORACLE'S OPPOSITION TO GOOGLE'S MOTION IN LIMINE TO EXCLUDE EVIDENCE
REGARDING CTS
CASE NO. CV 10-03561 WHA
pa-1527443

Oracle opposes Google's motion to exclude evidence regarding the Android Compatibility Test Suite ("CTS").

I.   THE CTS PROVIDES PROOF OF INFRINGEMENT OF THE '104 PATENT

Google's Compatibility Definition Document (TX 2802) requires Android devices to meet certain performance characteristics in order to be certified as Android-compatible: "Compatible implementations must ensure not only that applications simply run correctly on the device, but that they do so with reasonable performance and overall good user experience. Device implementations MUST meet the key performance metrics of an Android 2.3 compatible device," as specified in the document. (TX 2802 at 122; *see also* Brady Topic 9 Dep. 121:6-128:1, attached as Exhibit A; Morrill Dep. 167:3-169:20, attached as Exhibit B.)

The CTS ensures that devices meet these characteristics through testing. Some CTS tests test the performance of Android phones—these tests are highly relevant to Oracle's infringement claims. The fact that OEM device manufacturers must pass these tests before calling their phone "Android" suggests that they have not changed Android's symbolic reference resolution functions, which would significantly and negatively affect performance. The Android Gingerbread source code (TX 47) includes a number of CTS performance tests:

- 0047\gingerbread23 - GOOGLE-00-00000527\cts\tests\tests\performance\src\android\performance\cts\MultiAppStartupTest.java (Tests that restart of calculator takes less time than start of calculator)

- 0047\gingerbread23 - GOOGLE-00-00000527\cts\tests\tests\performance2\src\android\performance2\cts\AppStartup.java (Tests for average MusicBrowserActivity in com.android.music startup time of less than 500 milliseconds)

- 0047\gingerbread23 - GOOGLE-00-00000527\cts\tests\tests\performance3\src\android\performance3\cts\AppStartup.java (Tests for average BrowserActivity in com.android.browser startup time of less than 1300 milliseconds)

- 0047\gingerbread23 - GOOGLE-00-00000527\cts\tests\tests\performance4\src\android\performance4\cts\AppStartup.java (Tests for average ui.ConversationList in com.android.mms startup time of less than 700 milliseconds)

- 0047\gingerbread23 - GOOGLE-00-
  00000527\cts\tests\tests\performance5\src\android\performance5\cts\AppStartup.ja
  va (Tests for average AlarmClock in com.android.alarmclock startup time of less
  than 650 milliseconds)

The CTS thus provides circumstantial evidence that OEMs include on their devices the infringing

functionality that Google provides to them.

II.   THE CTS PROVIDES PROOF OF INFRINGEMENT OF THE '520 PATENT

The Court should allow Oracle to present evidence regarding the Android CTS for the

'520 patent because the CTS directly tests the accused behavior in Android. Specifically, the

CTS includes a test for the fill-array-data instruction that the Android code accused of

infringement creates. (*See* TX 47 at 0047\gingerbread23 - GOOGLE-00-00000527\cts\tools\vm-

tests\src\dot\junit\opcodes\fill_array_data\Test_fill_array_data.java.) That OEMs pass these tests

suggests that they do not change Dalvik's ability to execute the fill-array-data instruction, a

Dalvik instruction used for array initialization. Indeed, the final step in claim 1 of the '520 patent

is "interpreting the instruction by a virtual machine to perform the static initialization of the

array." By requiring OEMs to pass the CTS to certify their devices as Android-compatible,

Google actually requires them to perform a step of the patented method (a step that Google has

refused to admit that its licensees perform, the Court may recall). This evidence is highly

probative, and the jury should hear it.

Google's only argument to exclude CTS evidence for the '520 patent is that "the CTS

includes no tests directed at the Android Software Development Kit." That is flat wrong. The

CTS includes tests directed to confirm the proper functioning of dx tool's simulation of Java

bytecodes that participate in static array initialization. (*See, e.g.*, bytecode tests in

0047\gingerbread23 - GOOGLE-00-00000527\cts\tools\dx-tests\src\dxc\junit\opcodes (opcodes

newarray, iastore, lastore, fastore, dastore, aastore, bastore, and sastore).) The dx tool is part of

the Android SDK, and is part of the software accused of infringing the '520 patent. If any

developer or OEM were to change the dx tool, speculation for which there is no evidence, the

CTS tests suggest that the manner of creating the fill-new-array instruction would not be changed.

III.   GOOGLE'S OBJECTIONS ARE INSUFFICIENT TO EXCLUDE THIS EVIDENCE

Google claims that Professor Mitchell did not utilize performance tests to prove infringement. In fact, Professor Mitchell refers to the performance tests of the CTS in paragraph 188 of his opening report, which Google attached to its motion as Exhibit C.

Google's argument that testimony in this area would duplicate Phase I testimony (ECF No. 1080 at 5) is false. Mr. Morrill's testimony during Phase I did not cover tests for the Dalvik Virtual Machine, let alone performance tests. Oracle expects Mr. Morrill's and Mr. Brady's testimony to confirm the presence of the patented technology.

IV.   CONCLUSION

For the reasons stated above, the Court should deny Google's motion to exclude the CTS evidence from trial.

Dated: May 6, 2012   MORRISON & FOERSTER LLP

                                                      By: /s/ Marc David Peters

                                                      Attorneys for Plaintiff
                                                      ORACLE AMERICA, INC.

EXHIBIT A

1   UNITED STATES DISTRICT COURT

2   NORTHERN DISTRICT OF CALIFORNIA

3   SAN FRANCISCO DIVISION

4

5   _____

6   ORACLE AMERICA, INC.,   )

7   Plaintiff,   )

8   vs.   ) No. CV 10-03561 WHA

9   GOOGLE, INC.,   )

10   Defendant.   )

11   _____)

12

13

14   HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

15

16

17   Videotaped Deposition of DANIEL MORRILL,

18   taken at 333 Twin Dolphin Drive, Suite

19   400, Redwood Shores, California, commencing

20   at 9:43 a.m., Tuesday, July 12, 2011,

21   before Leslie Rockwood, RPR, CSR No. 3462.

22

23

24

25   PAGES 1 - 248

Page 1

1   MS. TERAGUCHI: Yuka Teraguchi of Morrison &

2   Foerster for plaintiff Oracle America.

3   MR. WEINGAERTNER: Scott Weingaertner of

4   King & Spalding for Google.

5   MR. KAMBER: Matthias Kamber of Keker & Van   09:41:11

6   Nest for Google.

7   MR. HWANG: Renny Hwang of Google.

8   THE VIDEOGRAPHER: Thank you, Counsel.

9   The witness will be sworn in and we may

10   proceed.   09:41:21

11   THE REPORTER: Would you raise your right

12   hand, please, Mr. Morrill.

13   You do solemnly state that the evidence you

14   shall give in this matter shall be the truth, the whole

15   truth and nothing but the truth, so help you God.

16   THE WITNESS: I do.

17   THE REPORTER: Thank you.

18   EXAMINATION

19   BY MR. MUINO:

20   Q. Good morning, Mr. Morrill.   09:41:34

21   A. Good morning.

22   Q. Can you please state your full name for the

23   record.

24   A. My full name is Daniel Lawrence Morrill.

25   Q. And what is your home address?   09:41:43

                                                          Page 5

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1   do you know if one of the optimizations performed by the

2   dexopt tool is to change symbolic references in the DEX

3   bytecode to the memory location of the data referred to

4   by those references?

5   A.   I don't know either way.   15:33:39

6   Q.   Okay. With respect to the dexopt tool, do

7   you know if one of the optimizations that it makes is to

8   change certain bytecode instructions into in-line native

9   code?

10   A.   I don't know either way.   15:33:54

11   MR. WEINGAERTNER: Object to the form.

12   Q.   BY MR. MUINO: Okay. Let's go back to the

13   Android 2.2 compatibility definition.

14   A.   Uh-huh.

15   Q.   And take a look at page 10, Section 5. And   15:34:06

16   this is the application packaging compatibility. It's

17   entitled "Application Packaging Compatibility." The

18   first sentence says: "Device implementations must

19   install and run Android.APK files as generated by the

20   AAPT tool included in the official Android SDK."   15:34:28

21   Do you see that?

22   A.   I do.

23   Q.   Second paragraph says: "Device

24   implementations must not extend either the .APK, Android

25   manifest, the Dalvik bytecode formats in such a way that 15:34:42

Page 165

1   would prevent those files from installing and running

2   correctly on other compatible devices. Device

3   implementers should use the reference upstream

4   implementation of Dalvik and the reference

5   implementations package management system."   15:34:56

6   Do you see that?

7   A. I do.

8   Q. Did you author this -- those two paragraphs?

9   A. In this form, yes, but I did not originate

10   this section.   15:35:14

11   Q. Okay. The last sentence that I read there

12   with respect to the reference upstream implementation of

13   Dalvik, does that refer to the Dalvik virtual machine?

14   A. It would refer to the source code of the

15   Dalvik virtual machine, yes.   15:35:27

16   Q. Okay. And pursuant to the CDD, Google is

17   instructing the device implementers should use the Dalvik

18   source code; is that correct?

19   A. Device as it is written, device

20   implemented -- -- device implementers should use the   15:35:47

21   reference upstream implementation.

22   Q. Okay.

23   A. It's probably worth noting that this is

24   merely a reinforcement of the language in section --

25   well, in Section 1 in the introduction where we refer to,   15:36:06

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1   again, the reference implementation and the upstream

2   Android Open Source Project.

3   Q. Okay. Let's refer to Section 10 now. This

4   is on page -- page 18. I'm sorry, I misspoke. Let's

5   look at Section 9 on page 17. It's the bottom of   15:36:35

6   page 17.

7   And the first paragraph, the first sentence

8   there says: "One of the goals of the Android

9   compatibility program is to enable consistent application

10   experience to consumers. Compatible implementations must   15:36:49

11   ensure not only that applications simply run correctly on

12   the device, but that they do so with reasonable

13   performance and overall good user experience."

14   Do you see that?

15   A. I do see that.   15:37:03

16   Q. Did you write that portion?

17   A. I actually think I did not, but I don't

18   recall clearly.

19   Q. Okay. Do you have an understanding of what

20   "reasonable performance" means here?   15:37:23

21   A. In context it would refer to the contents of

22   the table immediately following, but I do not have a

23   precise answer for what "reasonable performance" would

24   be meant -- or would mean here.

25   Q. Okay. Is it a requirement of the CDD that   15:37:48

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1   Android devices meet the performance thresholds that are

2   shown in the chart below in this Section 9?

3   A.   Section 9 is included in the CDD, and the CDD

4   is the definition of a compatible device, yes.

5   Compatible devices must meet the performance   15:38:08

6   specifications in the table -- or in Section 9.

7   Q.   Okay. And if you look at the table there,

8   the first row of the table, well, second row, the first

9   row of data is application -- says "application launch

10   time." And the second column there says: "The following   15:38:24

11   applications should launch within the specified time:

12   Browser less than 1300 milliseconds, MMS-SMS less

13   than 700 milliseconds, alarm clock less than

14   650 milliseconds."

15   Do you see that?   15:38:46

16   A.   I do.

17   Q.   Okay. It's required for an

18   Android-compatible device that these applications launch

19   in these specified times in order to be compatible under

20   the CDD; is that right?   15:38:59

21   A.   That is correct.

22   Q.   Why is -- why is speed important to Google

23   for the launch of applications?

24   A.   Because an end-user might obtain a phone and

25   unknowingly purchase a, you know, poor quality phone,   15:39:23

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1   such as it might have an obsolete processor in it or it

2   might have a, you know -- excuse me -- a poor driver

3   implementation or some other defect that makes it

4   unreasonably slow or at least slower than its competitors

5   in its class.   15:39:43

6   This user would then install applications on

7   it, you know, such as from Android market and then judge

8   the quality of those applications in a negative light

9   because the device is slow. In other words, the device's

10   poor performance would reflect -- in the user's eyes,   15:40:00

11   would reflect poorly on the application. Whereas if the

12   user were more informed and knowledgeable, they would

13   know that the blame should properly be placed on the OEM.

14   The intent of this section in the CDD is to

15   make sure that Android devices meet a minimal threshold   15:40:17

16   of performance to rule out the scenario that I just

17   described. So that we can rely on the fact that

18   applications will launch in a reasonable amount of time

19   and that the user will not blame third-party developers

20   for the errors or implementation issues of an OEM.   15:40:36

21   Q.   Is the launch speed of applications something

22   that's important to consumers?

23   A.   In the way I just described, yes.

24   Q.   Okay. And are you aware of portions of

25   Android or elements of Android that are designed to   15:41:01

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1   increase the speed of the launch of applications?

2   MR. WEINGAERTNER: Objection to form.

3   THE WITNESS: Yes. We have several

4   performance optimization avenues that we routinely pursue

5   in launching a device.   15:41:21

6   Q. BY MR. MUINO: Okay. And tell me the ones

7   that you're aware of.

8   A. Sure. One example is the specific type and

9   nature of the -- you know, would we call the flash part

10   or the storage chip. Some models are faster than others; 15:41:40

11   some storage types or classes are faster than others.

12   Another example is the -- the file system in

13   use on that partition. In some cases, the -- for

14   example, I believe today we use the X4 -- EXT 4 file

15   system because it tends to be faster and more reliable   15:42:08

16   than the file systems we've used previously.

17   We have a variety of deferred loading, you

18   know, and load-on-demand techniques that we use in the

19   software, and we have a variety of pre-caching or

20   pre-loading techniques that we use, one of which is the   15:42:31

21   dexopt tool that you referred to previously, and another

22   is the Zygote technique that you also referred to

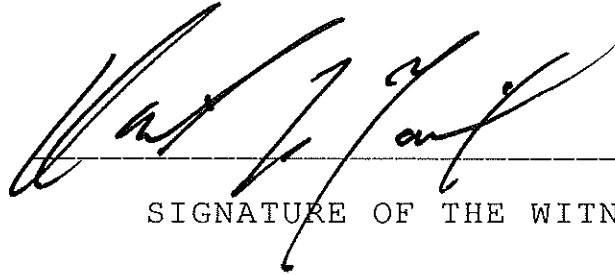23   previously.

24   Q. Okay.

25   A. There are others, but those are two of the   15:42:43

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1   I declare under the penalty of perjury

2 under the laws of the State of California that the

3 foregoing is true and correct.

4   Executed on *15 August, 2011*, 2011,

5 at *Mountain View*, *California*   .

6

7

8

9 _____

10   SIGNATURE OF THE WITNESS

11

12

13

14

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1   STATE OF CALIFORNIA   ) ss:

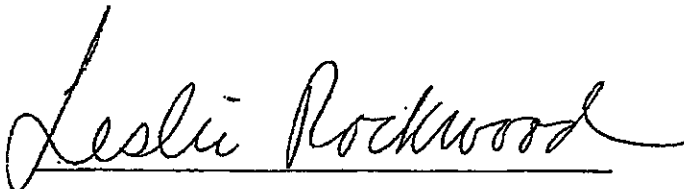2   COUNTY OF MARIN   )

3

4   I, LESLIE ROCKWOOD, CSR No. 3462, do hereby

5   certify:

6   That the foregoing deposition testimony was

7   taken before me at the time and place therein set forth

8   and at which time the witness was administered the oath;

9   That testimony of the witness and all

10   objections made by counsel at the time of the examination

11   were recorded stenographically by me, and were thereafter

12   transcribed under my direction and supervision, and that

13   the foregoing pages contain a full, true and accurate

14   record of all proceedings and testimony to the best of my

15   skill and ability.

16   I further certify that I am neither counsel

17   for any party to said action, nor am I related to any

18   party to said action, nor am I in any way interested in

19   the outcome thereof.

20   IN WITNESS WHEREOF, I have subscribed my name

21   this 15th day of July, 2011.

22

23

24   _Leslie Rockwood_

25   LESLIE ROCKWOOD, CSR. NO. 3462

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EXHIBIT B

1   UNITED STATES DISTRICT COURT

2   NORTHERN DISTRICT OF CALIFORNIA

3   SAN FRANCISCO DIVISION

4

5   --------------------------

6   ORACLE AMERICA, INC.,   )

7   Plaintiff,   )

8   vs.   )   No. CV 10-03561 WHA

9   GOOGLE, INC.,   )

10   Defendant.   )

11   --------------------------

12

13

14   -- HIGHLY CONFIDENTIAL, ATTORNEYS' EYES ONLY --

15

16   Videotaped Federal Rule 30(b)(6), Topic 9,

17   deposition of PATRICK BRADY, taken at the law

18   offices of King & Spalding LLP, 333 Twin Dolphin

19   Drive, Redwood Shores, California, commencing at

20   2:24 p.m., Thursday, July 21, 2011, before

21   Leslie Rockwood, RPR, CSR No. 3462.

22

23

24

25   PAGES 1 - 149

                                            Page 1

```
 1    Flexner for plaintiff Oracle America.

 2               MR. KAMBER:  Matthas Kamber of Keker & Van

 3    Nest for Google, Inc.

 4               THE VIDEOGRAPHER:  Thank you.

 5               Will the reporter please swear the witness.    14:26:21

 6               THE REPORTER:  Raise your right hand, please.

 7               You do solemnly state that the evidence you

 8    shall give in this matter shall be the truth, the whole

 9    truth and nothing but the truth so help you God --

10               THE WITNESS:  I do.                            09:38:38

11               THE REPORTER:  Thank you.

12               THE VIDEOGRAPHER:  -- thank you.

13               Please proceed.

14                         EXAMINATION

15    BY MR. NORTON:                                           14:26:39

16          Q.  Good afternoon.

17          A.  Good afternoon.

18          Q.  As you heard, my name's Fred Norton.  I

19    represent Oracle.  As I mentioned before we went on the

20    record, obviously you were already deposed on another    14:26:48

21    subject matter earlier today, and so I'm going to try not

22    to go over things that were already covered.  But from

23    time to time I'll have to ask you a question just to set

24    up the context.  But I'll try to be as respectful of your

25    time as I can be and get out of here as quickly as we can 14:27:07
```

Page 4

1   Q.   And do you recall when this was?

2   A.   I want to say that these conversations came

3   up. Things with Vodafone move slow at times. So this --

4   I want to say it spanned the second half of 2009 and

5   2010.   17:53:48

6   Q.   Okay. And if you turn to the prior page,

7   still in Exhibit 230, there's a Section 9 called

8   "Performance Compatibility."

9   A.   Yep.

10   Q.   Would you just read aloud the three sentences   17:54:06

11   that appear there?

12   MR. KAMBER: Object to the form.

13   THE WITNESS: The three sentences that appear

14   directly underneath 9 -- the section heading?

15   Q.   BY MR. NORTON: Yes. Just read it out loud   17:54:22

16   please.

17   MR. KAMBER: Same objection.

18   THE WITNESS: As the document reads: "One of

19   the goals of the Android compatibility program -- of the

20   Android compatibility program is to enable consistent   17:54:30

21   application experience to consumers. Compatible

22   implementations must ensure not only that applications

23   simply run correctly on the device but that they do so

24   with reasonable performance and overall good user

25   experience. Device implementations must meet the key   17:54:50

                                                 Page 121

```
 1    performance metrics of the Android 2.2 compatible device

 2    defined in the table below."

 3          Q.   BY MR. NORTON:  And then there's a table that

 4    has criteria set forth there; right?

 5          A.   Yeah.                                          17:55:04

 6          Q.   Now, is there any testing that Google does to

 7    ensure -- and does the CTS test to see whether devices

 8    satisfy the criteria set forth in Section 9?

 9          A.   I believe it does test some of these, yeah.

10          Q.   All right.  And the specific criteria that     17:55:25

11    are set out here are application launch time and then

12    simultaneous applications?

13          A.   Yes.

14          Q.   And under application time, the standard is

15    that the following applications should launch within the  17:55:37

16    specified time, the browser less than 1300 milliseconds

17    MMS/SMS less than 700 milliseconds and alarm and clock

18    less than 650 milliseconds; is that right?

19          A.   Alarm clock is a single application here.

20          Q.   Oh, thank you.                                 17:55:58

21               And so that's -- in the case of the browser,

22    1.3 seconds to connect, 1300 milliseconds?

23          A.   If my math is correct, yes.

24          Q.   And why does Google care how quickly these

25    things launch?                                            17:56:15
```

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1   A.   Well, when -- one of the things that we found

2   when we had the OEMs making Android devices -- porting

3   the Android platform to their devices and running this is

4   sometimes the -- the -- this talks about user experience.

5   But it's also developer experience.   17:56:38

6   So Rovio, for example, is very upset when

7   their app runs very slowly. And they get complaints. Or

8   they'll get returns, if it's a paid app. Or their app

9   will be rated poorly. And, you know, the app developer

10   has basically, you know, nothing much they can do; right,   17:56:57

11   if the device is just too slow?

12   And so here we're trying to put some, you

13   know, we think fairly conservative and not onerous

14   requirements on OEMs to maintain some minimum level of

15   performance for users and application developers so that   17:57:20

16   it's a reasonable experience.

17   Q.   Okay. Other than the concern that developers

18   will have a bad experience because they might get

19   complaints or returns, are there other reasons why Google

20   wants to -- has as a goal to enable consistent   17:57:41

21   application experience to consumers?

22   A.   It's really -- from a compatibility

23   standpoint, it's really about developers. So I'll

24   state -- you know, consumers indirectly drive, you know,

25   the developer experience, I guess I should say. The   17:58:02

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1   consumer experience drives the developer experience, if

2   that makes sense.

3   So when a device -- you know, an application

4   developer creates an application that -- a great

5   application, but the device executes that application   17:58:18

6   poorly, the developer has a bad experience, because they

7   may get rated poorly. They may suffer returns. They

8   may, you know, have upset users. And so that's generally

9   what we're trying to ensure doesn't happen here.

10   Q. All right. And at the risk of pushing too   17:58:37

11   hard on the obvious, why does Google care about whether

12   or not the developers have bad experiences with their

13   applications running on a given device?

14   A. Because, I mean, generally, any ecosystem

15   needs developers -- an app ecosystem needs developers.   17:58:55

16   And developers who have a bad experience leave.

17   Q. The other performance criterion here is

18   simultaneous applications.

19   A. Yep.

20   Q. And the standard there in the compatibility   17:59:10

21   definitions is that when multiple applications have been

22   launched, relaunching an already running application

23   after it has been launched must take less than the

24   original launch time.

25   A. This is an interesting metric. Yes.   17:59:24

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1   Q. So in other words, when you relaunch it, it

2   will start faster than it did the first time?

3   A. Yes. I think maybe relaunching it isn't -- I

4   don't know -- an exact term here. One of the things that

5   Android does -- or that Android developers do in Android   17:59:43

6   is, you know, launch one application from another.

7   So I may have an application that I can

8   launch out to send an email or do something, and then I

9   hit "back." And Android has this notion of an affordance

10   for the user to go back. And you'll go back to the   18:00:03

11   application you were in. So it's kind of integration

12   between applications.

13   In this case, what we're trying to say is if

14   I open whatever application it may be, and it has an

15   option to email someone, and I hit the email button and   18:00:19

16   it launches the email application, when I go back, I

17   don't want that -- you know, that old application to take

18   longer than it initially took to launch. Does that make

19   sense?

20   Q. So I'm in the browser, and I click on an   18:00:33

21   email address. It opens the email program. I don't want

22   to send an email right now, and I want to go back to the

23   browser. So I go back to the browser. And I don't want

24   to wait for the browser to take launch as long as it took

25   the first time; right?   18:00:50

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 1            A.   Right.

 2            Q.   Okay.  So again, this is about -- it's a

 3    particular application of speed, but it's about speed?

 4            A.   Yes.

 5            Q.   And, in fact, both of these criteria for        18:00:58

 6    performance are about -- I'm sorry.  Go ahead.  Sorry.

 7            A.   Well, I'd say it's about speed, but it's

 8    really -- here, I mean, it's about the ability to run

 9    multiple applications at once.

10            Q.   Okay.                                           18:01:11

11            A.   So a big part of Android is multitasking.

12    And, you know, when trying to define that, what we're

13    trying to figure out is, well, okay, do you need to be

14    able to run -- you know, in defining the requirements,

15    able to run multiple applications at once?  Well, the     18:01:32

16    default user experience in Android is a single foreground

17    application.  And so the way we're trying to codify that

18    here is, say, well, when you go back to a previously open

19    application, it should launch faster than if it was from

20    a cold start.  It's perhaps a -- but yes, that's what      18:01:49

21    it's about, performance.

22            Q.   And strictly speaking, what Section 9 is

23    doing with it is not compatibility, per se, but just how

24    well the device performs when consumers have them.

25            MR. KAMBER:  Objection to form.                     18:02:14
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1   THE WITNESS: No. I think it is

2   compatibility. And this is something that we've debated

3   for a long time. From an application developer

4   perspective, you can have two devices that may be

5   technically able -- you know, one device that runs an   18:02:30

6   application well and one device that technically executes

7   the byte code but does it extremely slowly.

8   And, you know -- and we need, you know, from

9   an application developer's perspective, they maybe, you

10   know, don't consider those two devices to be compatible,   18:02:45

11   because they can't write their applications the same

12   way -- they can't use the same application on both

13   devices.

14   And so what we're doing here is putting, in

15   all honesty, a very low bar on -- on, you know, the   18:02:59

16   minimum performance requirements you must have.

17   So, I mean, from our sense, it really is

18   about compatibility here.

19   And, you know, we constantly get complaints

20   from the developer that, "Hey, when I -- when I want to   18:03:19

21   play a sound on this given device, sometimes there's a

22   2-second lag before the song gets played," you know, "and

23   on this other device, there's no lag." That's, you know,

24   the same -- the same application is executing on both

25   devices, but they're incompatible from a user experience   18:03:36

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1   perspective. And that's a problem for developers.

2   Q. All right. So stepping back a little bit,

3   this -- the OEM is free to customize Android in various

4   ways, but one of the things that they have to do is make

5   sure that when they customize Android, they do not impair   18:03:58

6   the performance of the platform with respect to its

7   ability to launch programs quickly and multi-task?

8   A. According to these specific provisions, yes,

9   they need to meet those.

10   Q. And these particular applications that are   18:04:15

11   called out here, the browser, MMS and the alarm clock,

12   those are just proxies for the general ability of the

13   platform to meet overall speed expectations. Is that

14   fair?

15   A. Yes. And I believe those applications would   18:04:38

16   have been adjusted over time. But yes, I mean, we're

17   trying to establish some standard reference that we can

18   use to have an objective, you know, assessment across

19   different devices.

20   Q. So the idea is if it can launch the browser   18:04:52

21   as fast as we need to launch the browser, it will

22   probably run Angry Birds okay?

23   A. I wish that was a valid assertion. But, you

24   know, I mean, at some point you have to be realistic;

25   right? And we're not going to be able to test these two   18:05:08

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 1   STATE OF CALIFORNIA      ) ss:

 2   COUNTY OF MARIN          )

 3

 4            I, LESLIE ROCKWOOD, CSR No. 3462, do hereby

 5   certify:

 6            That the foregoing deposition testimony was

 7   taken before me at the time and place therein set forth

 8   and at which time the witness was administered the oath;

 9            That testimony of the witness and all

10   objections made by counsel at the time of the examination

11   were recorded stenographically by me, and were thereafter

12   transcribed under my direction and supervision, and that

13   the foregoing pages contain a full, true and accurate

14   record of all proceedings and testimony to the best of my

15   skill and ability.

16            I further certify that I am neither counsel

17   for any party to said action, nor am I related to any

18   party to said action, nor am I in any way interested in

19   the outcome thereof.

20            IN WITNESS WHEREOF, I have subscribed my name

21   this 26th day of July, 2011.

22

23

24            LESLIE ROCKWOOD, CSR. NO. 3462

25
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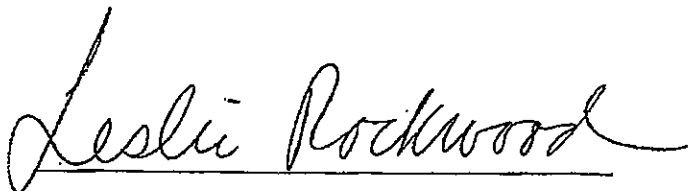
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